REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

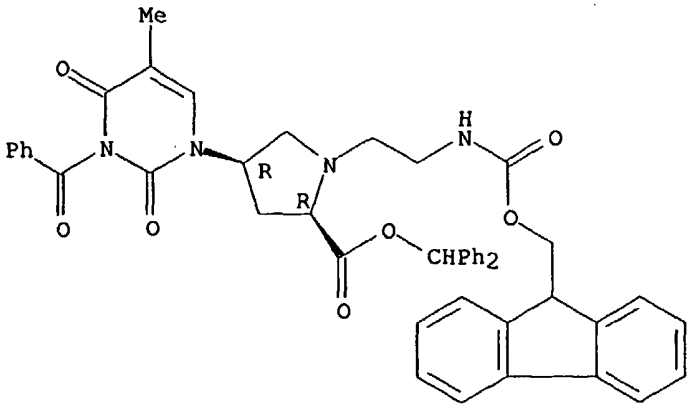
L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:844932 HCAPLUS
DOCUMENT NUMBER: 134:147837
TITLE: Synthesis and properties of chiral peptide nucleic acids with a N-aminoethyl-D-proline backbone
AUTHOR(S): Vilaivan, Tirayut; Khongdeesameor, Chanchai; Harnyuttanakorn, Pongchai; Westwell, Martin S.; Lowe, Gordon
CORPORATE SOURCE: Organic Synthesis Research Unit, Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok, 10330, Thailand
SOURCE: Bioorganic & Medicinal Chemistry Letters (2000), 10(22), 2541-2545
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:147837

AB A synthon of D-proline substituted at the 4-position by thymine and at N by a flexible aminoethyl linker, has been used to prep. a novel chiral peptide nucleic acid (cPNA) with (2R,4R) stereochem. using solid phase methodol. The homothymine decamer cPNA binds to complementary polyadenylic acid to form 2:1 hybrid with high affinity and specificity according to UV and CD studies, whereas no binding to the corresponding polydeoxyadenylic acid was obsd.

IT **318515-52-5P 318515-53-6P 318515-54-7P 318515-55-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(solid phase synthesis and properties of chiral peptide nucleic acids with a aminoethylproline backbone)

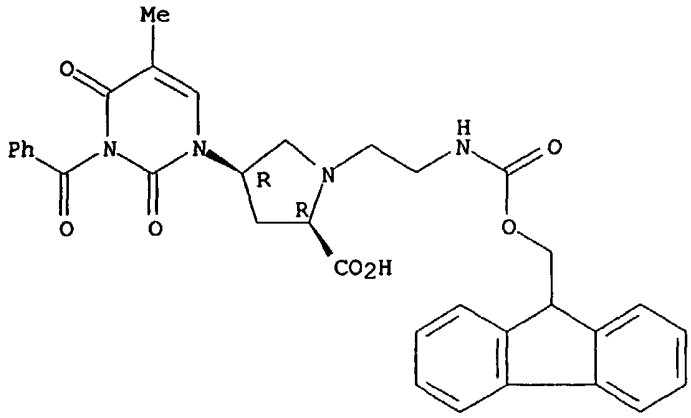
RN 318515-52-5 HCAPLUS
CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(9H-fluoren-9-ylmethoxy)carbonyl]amino]ethyl]-, diphenylmethyl ester, (4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 318515-53-6 HCAPLUS
CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(9H-fluoren-9-ylmethoxy)carbonyl]amino]ethyl]-, monohydrochloride, (4R)- (9CI) (CA INDEX NAME)

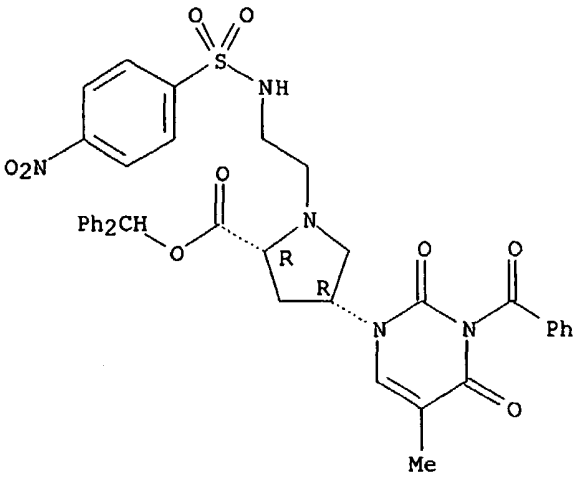
Absolute stereochemistry. Rotation (+).



● HCl

RN 318515-54-7 HCAPLUS
CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(4-nitrophenyl)sulfonyl]amino]ethyl]-, diphenylmethyl ester, (4R)- (9CI) (CA INDEX NAME)

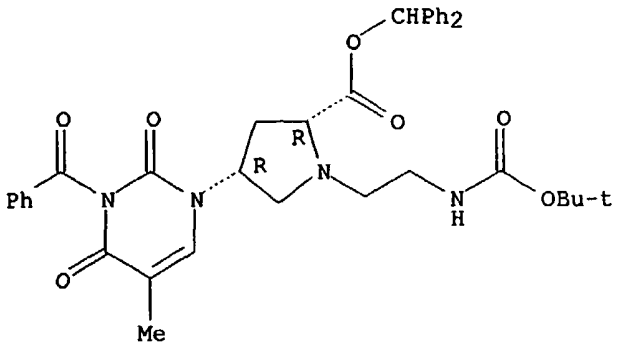
Absolute stereochemistry.



RN 318515-55-8 HCAPLUS

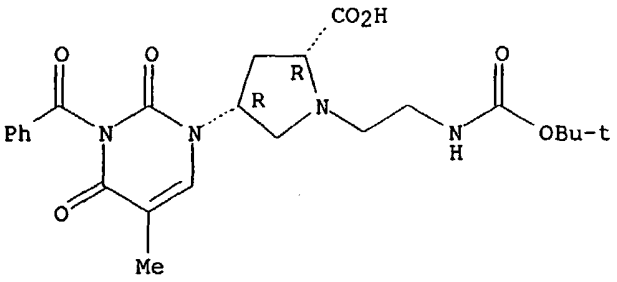
CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, diphenylmethyl ester, (4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT **318515-56-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(solid phase synthesis and properties of chiral peptide nucleic acids with a aminoethylproline backbone)
RN 318515-56-9 HCAPLUS
CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:663052 HCAPLUS
DOCUMENT NUMBER: 132:251401
TITLE: Aminoethylprolyl Peptide Nucleic Acids (aepPNA): Chiral PNA Analogues That Form Highly Stable DNA:aepPNA2 Triplexes
AUTHOR(S): D'Costa, Moneesha; Kumar, Vaijayanti A.; Ganesh, Krishna N.
CORPORATE SOURCE: Division of Organic Chemistry (Synthesis), National Chemical Laboratory, Pune, 411008, India

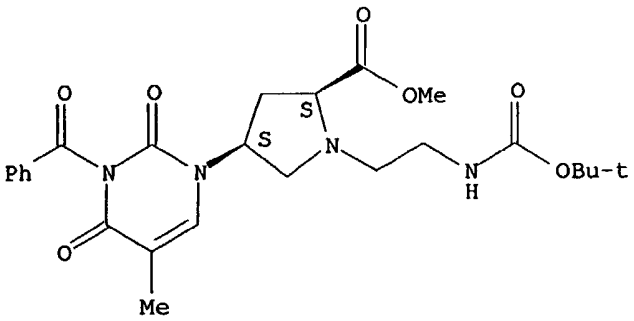
SOURCE: Organic Letters (1999), 1(10), 1513-1516
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The replacement of the glycyl component in the peptide nucleic acid (PNA) backbone by a prolyl unit bearing a nucleobase leads to the aminoethylprolyl (aep) PNAs, which are chiral and cationic. The homo-oligomeric aepPNA binds to complementary DNA sequences with high affinity and sequence specificity, forming highly stable triplexes.

IT **253307-69-6P 253307-71-0P 253307-74-3P 253307-76-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of in the synthesis of aminoethylprolyl peptide nucleic acids)

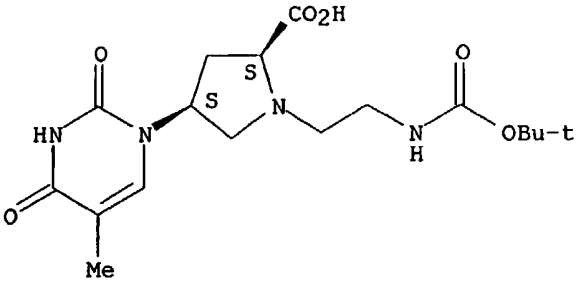
RN 253307-69-6 HCAPLUS
CN L-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 253307-71-0 HCAPLUS
CN L-Proline, 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

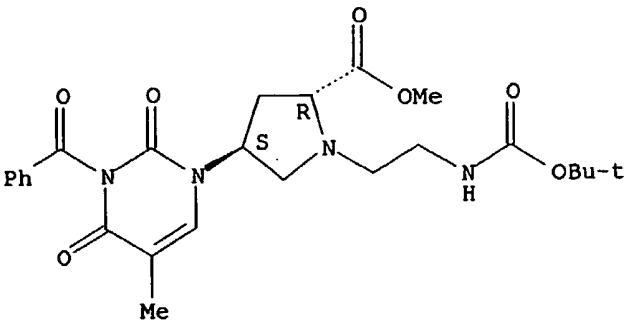
Absolute stereochemistry.



RN 253307-74-3 HCAPLUS
CN D-Proline, 4-(3-benzoyl-3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-

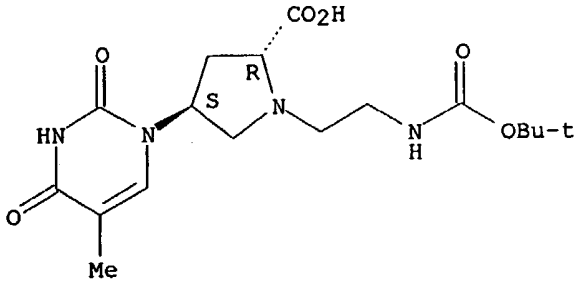
1-[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, methyl ester, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 253307-76-5 HCAPLUS
CN D-Proline, 4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-1-[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, (4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **262614-79-9P 262614-81-3P 262615-03-2P**
262615-29-2P 262615-33-8P 262615-36-1P
262615-38-3P 262615-58-7P 262615-78-1P
262615-79-2P 262615-84-9P 262615-88-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and triplex stability of)
RN 262614-79-9 HCAPLUS
CN DNA, d(G-C-A-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid (H-T-T-T-T-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9
CMF Unspecified
CCI MAN
CDES NS

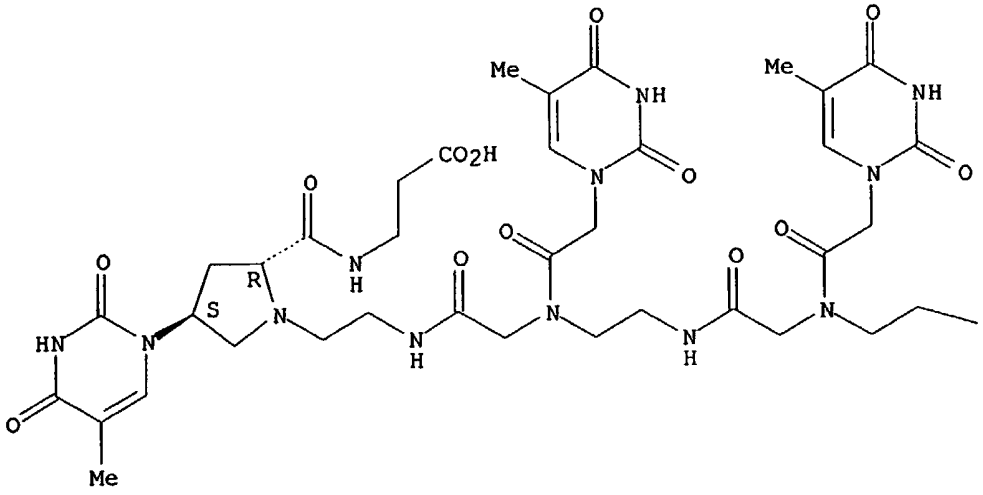
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

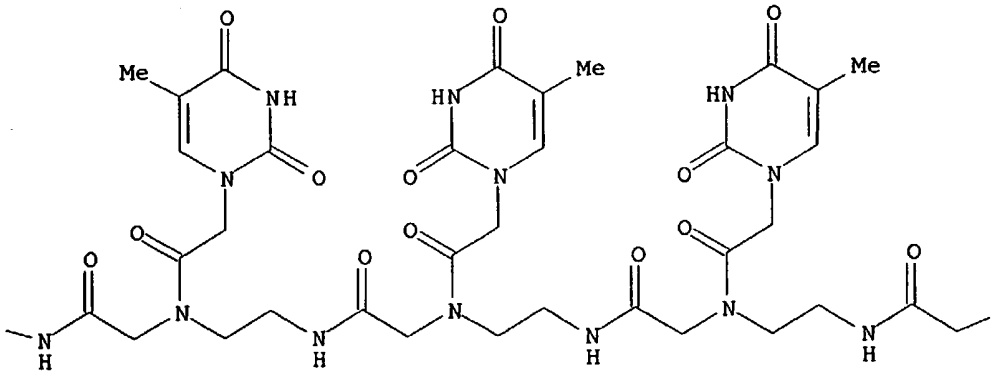
CRN 253307-78-7
CMF C92 H121 N33 O33

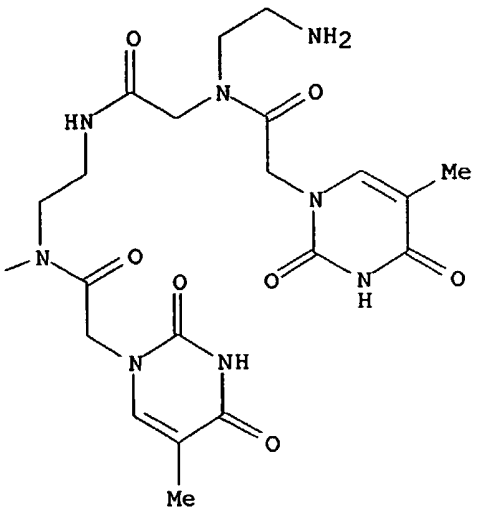
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B





RN 262614-81-3 HCAPLUS
CN DNA, d(G-C-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid (H-T-T-T-T-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9
CMF Unspecified
CCI MAN
CDES NS

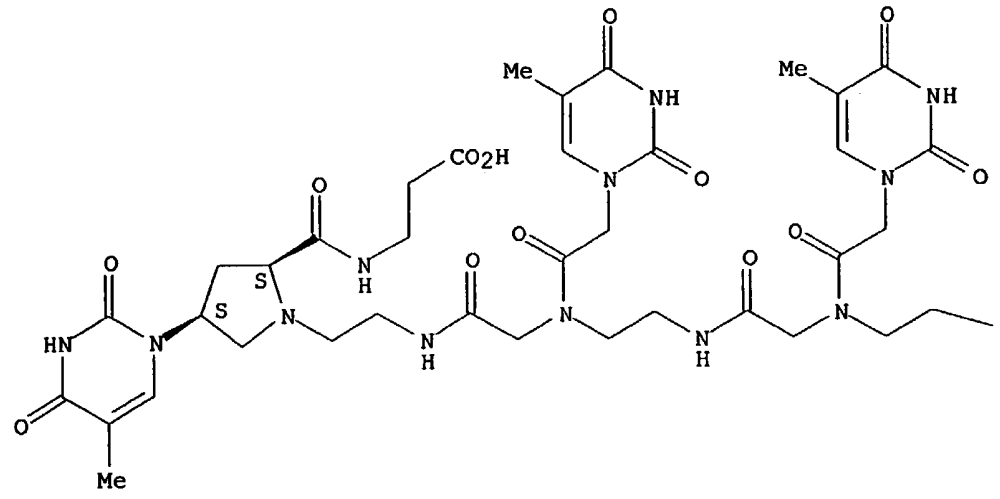
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

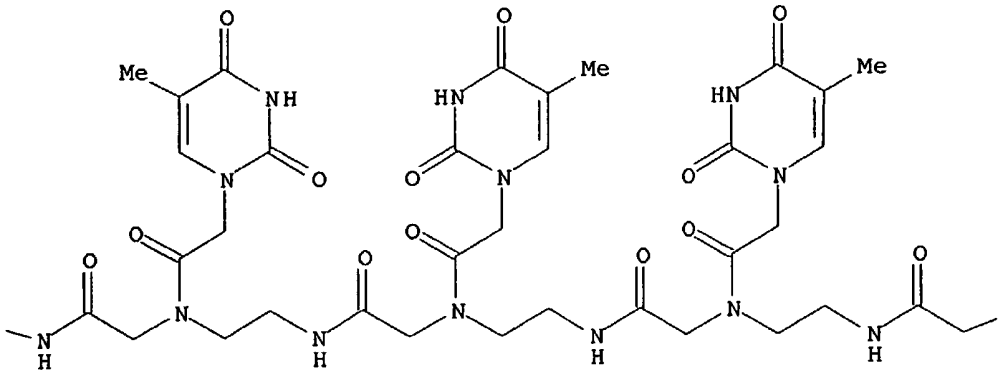
CRN 253307-80-1
CMF C92 H121 N33 O33

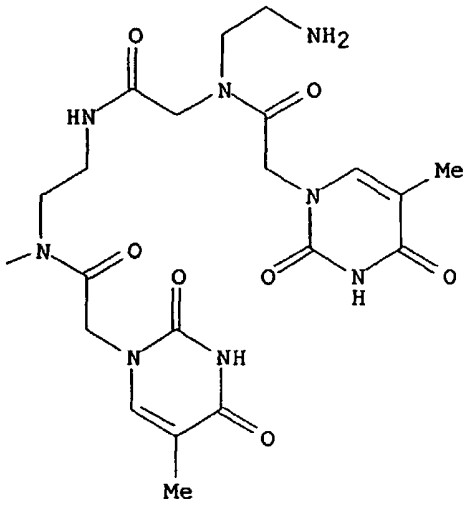
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B





RN 262615-03-2 HCAPLUS
CN DNA, d(G-C-A-A-A-A-A-A-A-A-C-G), complex with peptide nucleic acid (H-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro-T-T-T-(4S)-1-(2-aminoethyl)-4-(3,4-dihydro-5-methyl-2,4-dioxo-1(2H)-pyrimidinyl)-D-Pro)-Bal-OH (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 262408-13-9
CMF Unspecified
CCI MAN
CDES NS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 253307-82-3
CMF C93 H123 N33 O32

Absolute stereochemistry.